

## § 229.109

that prevents steam from entering the gauge. The pipe connection shall directly enter the separator and shall be steam tight between the separator and the gauge.

### § 229.109 Safety valves.

Every steam generator shall be equipped with at least two safety valves that have a combined capacity to prevent an accumulation of pressure of more than five pounds per square inch above the allowed working pressure. The safety valves shall be independently connected to the separator and located as closely to the separator as possible without discharging inside of the generator compartment. The ends of the safety valve discharge lines shall be located or protected so that discharged steam does not create a hazard.

### § 229.111 Water-flow indicator.

(a) Steam generators shall be equipped with an illuminated visual return water-flow indicator.

(b) Steam generators shall be equipped with an operable test valve or other means of determining whether the steam generator is filled with water. The fill test valve may not discharge steam or hot water into the steam generator compartment.

### § 229.113 Warning notice.

Whenever any steam generator has been shut down because of defects, a distinctive warning notice giving reasons for the shut-down shall be conspicuously attached near the steam generator starting controls until the necessary repairs have been made. The locomotive in which the steam generator displaying a warning notice is located may continue in service until the next periodic inspection.

## CABS AND CAB EQUIPMENT

### § 229.115 Slip/slide alarms.

(a) Except for MU locomotives, each locomotive used in road service shall be equipped with a device that provides an audible or visual alarm in the cab of either slipping or sliding wheels on powered axles under power. When two or more locomotives are coupled in multiple or remote control, the wheel

## 49 CFR Ch. II (10-1-11 Edition)

slip/slide alarm of each locomotive shall be shown in the cab of the controlling locomotive.

(b) Except as provided in § 229.9, an equipped locomotive may not be dispatched in road service, or continue in road service following a daily inspection, unless the wheel slip/slide protective device of whatever type—

(1) Is functioning for each powered axle under power; and

(2) Would function on each powered axle if it were under power.

(c) Effective January 1, 1981, all new locomotives capable of being used in road service shall be equipped with a device that detects wheel slip/slide for each powered axle when it is under power. The device shall produce an audible or visual alarm in the cab.

### § 229.117 Speed indicators.

(a) After December 31, 1980, each locomotive used as a controlling locomotive at speeds in excess of 20 miles per hour shall be equipped with a speed indicator which is—

(1) Accurate within  $\pm 3$  miles per hour of actual speed at speeds of 10 to 30 miles per hour and accurate within  $\pm 5$  miles per hour at speeds above 30 miles per hour; and

(2) Clearly readable from the engineer's normal position under all light conditions.

(b) Each speed indicator required shall be tested as soon as possible after departure by means of speed test sections or equivalent procedures.

### § 229.119 Cabs, floors, and passageways.

(a) Cab seats shall be securely mounted and braced. Cab doors shall be equipped with a secure and operable latching device.

(b) Cab windows of the lead locomotive shall provide an undistorted view of the right-of-way for the crew from their normal position in the cab. (See also, Safety Glazing Standards, 49 CFR part 223, 44 FR 77348, Dec. 31, 1979.)

(c) Floors of cabs, passageways, and compartments shall be kept free from oil, water, waste or any obstruction that creates a slipping, tripping or fire hazard. Floors shall be properly treated to provide secure footing.

(d) The cab shall be provided with proper ventilation and with a heating arrangement that maintains a temperature of at least 50 degrees Fahrenheit 6 inches above the center of each seat in the cab.

(e) Similar locomotives with open end platforms coupled in multiple control and used in road service shall have a means of safe passage between them; no passageway is required through the nose of car body locomotives. There shall be a continuous barrier across the full width of the end of a locomotive or a continuous barrier between locomotives.

(f) Containers shall be provided for carrying fuses and torpedoes. A single container may be used if it has a partition to separate fuses from torpedoes. Torpedoes shall be kept in a closed metal container.

**§ 229.121 Locomotive cab noise.**

(a) *Performance standards for locomotives.* (1) When tested for static noise in accordance with paragraph (a)(3) of this section, all locomotives of each design or model that are manufactured after October 29, 2007, shall average less than or equal to 85 dB(A), with an upper 99% confidence limit of 87 dB(A). The railroad may rely on certification from the equipment manufacturer for a production run that this standard is met. The manufacturer may determine the average by testing a representative sample of locomotives or an initial series of locomotives, provided that there are suitable manufacturing quality controls and verification procedures in place to ensure product consistency.

(2) In the maintenance of locomotives that are manufactured in accordance with paragraph (a)(1) of this section, a railroad shall not make any alterations that cause the average sound level for that locomotive design or model to exceed:

(i) 82 dB(A) if the average sound level for a locomotive design or model is less than 82 dB(A); or

(ii) 85 dB(A) if the average sound level for a locomotive design or model is 82 dB(A) to 85 dB(A), inclusive.

(3) The railroad or manufacturer shall follow the static test protocols set forth in appendix H of this part to determine compliance with paragraph

(a)(1) of this section; and, to the extent reasonably necessary to evaluate the effect of alterations during maintenance, to determine compliance with paragraph (a)(2) of this section.

(b) *Maintenance of locomotives.* (1) If a railroad receives an excessive noise report, and if the condition giving rise to the noise is not required to be immediately corrected under part 229, the railroad shall maintain a record of the report, and repair or replace the item identified as substantially contributing to the noise:

(i) On or before the next periodic inspection required by § 229.23; or

(ii) If the railroad determines that the repair or replacement of the item requires significant shop or material resources that are not readily available, at the time of the next major equipment repair commonly used for the particular type of maintenance needed.

(2) Conditions that may lead a locomotive cab occupant to file an excessive noise report include, but are not limited to: defective cab window seals; defective cab door seals; broken or inoperative windows; deteriorated insulation or insulation that has been removed for other reasons; broken or inoperative doors; and air brakes that vent inside of the cab.

(3) A railroad has an obligation to respond to an excessive noise report that a locomotive cab occupant files. The railroad meets its obligation to respond to an excessive noise report, as set forth in paragraph (b)(1) of this section, if the railroad makes a good faith effort to identify the cause of the reported noise, and where the railroad is successful in determining the cause, if the railroad repairs or replaces the items cause the noise.

(4) *Recordkeeping.* (i) A railroad shall maintain a written or electronic record of any excessive noise report, inspection, test, maintenance, replacement, or repair completed pursuant to § 229.121(b) and the date on which that inspection, test, maintenance, replacement, or repair occurred. If a railroad elects to maintain an electronic record, the railroad must satisfy the conditions listed in § 227.121(a)(2)(i) through (v).